

SEQUENCE LISTING

<110> CHRISTENSEN, GEIR
ANDERSSON, KRISTIN BREVIK

<120> NON-HUMAN MAMMAL COMPRISING A MODIFIED SERCA2 GENE AND
METHODS, CELLS, GENES, AND VECTORS THEREOF

<130> 3657-1037

<140> 10/585,077

<141> 2006-06-29

<150> PCT/NO04/000397

<151> 2004-12-22

<150> 60/533,740

<151> 2003-12-30

<160> 32

<170> PatentIn Ver. 3.3

<210> 1

<211> 801

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide construct

<400> 1

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accgggctcc acctcgtggg gcttggctcg gcgcggcgcc cgacggctgc gagaggccgg 180
cgggtccacgc gcgggtctgg gccatcgccg accttagggg tctcgaatca agcttatcga 240
taccgtcgat cggacctcga gggggggccc ggtacccggg gatcaattcg agctcgcccc 300
gggatcgatc cggaaccctt aatataactt cgtataatgt atgctatacg aagttattag 360
gtccctcgac ctgcagccca agctccgggg atctcgagcc ggtgaccttc ccggccggcg 420
ctcagcgagt cggattgggg ggggggggaga gggagtggga aggagggagg aggttcctgc 480
ggctgggctg agtccccgc ggatttatga ggcgtcgatg ttgttgagaa accctcggac 540
cgtttcttgt gctcccaaaa gttgcacatc tggcagaagt gatgaccag ctgaaatgac 600
tgcattggtc tggaggccgg agagggtta cgggcagttc cgaggccact gattaccagg 660
gctgaataat tttctcgggg tatcaaagt gagacagatt gttgtacgtt catacaccta 720
tatccgcat tcagacaacg atggtggtga atttagcagt ttttaataaa agcgctaata 780
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<210> 2

<211> 803

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
nucleotide construct

<400> 2

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gtttaagtct gacccagggg gatccggaac ccttaatata acttcgtata atgtatgcta 180
tacgaagtta ttaggtccct cgacctgcag cccaagctga tcctctagtc gagccccagc 240
tggttctttc cgctcagaa gccatagagc ccaccgcatc cccagcatgc ctgctattgt 300
cttcccaatc ctcccccttg ctgtcctgcc ccacccacc cccagaata gaatgacacc 360
tactcagaca atgcgatgca atttcctcat tttattagga aaggacagtg ggagtggcac 420
cttccagggt caaggaaggc acgggggagg ggcaacaac agatggctgg caactagaag 480
gcacagtcga ggctgatcag cgagctctag ctagagaatt gatccctca gaagaactcg 540
tcaagaaggc gatagaaggc gatgcgctgc gaatcgggag cggcgatccg taaagcacga 600
ggaagcggca gccattcgc cgccaagctc tttcagcaat atcacgggta gccaacgcta 660
tgtctgataa gcggctcggc cacacccaac cggccacaag tcatgaaatc caaaaaagcg 720
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<210> 3

<211> 860

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic nucleotide construct

<400> 3

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cgtagacgat atcgtcgagc gaaccaggg ccaccagcaa gttgcgtggg ggtggttttc 180
cccatccgtg gggacgtcta tataaacgc agtagcgtgg gcattttctg ctccgggagg 240
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cgagaacgag cagcctgggc gaacgcagac gcgtgtgat ggccggggta cgaagccata 360
cgcgcttcta caaggcgctg gccgaagagg tgcgggagtt tcacgccacc aagatctgcg 420
gcacgctgtt gacgctgtta agcgggtcgc tgcagggtcg ctcggtgttc gaggccacac 480
gogtcacctt aatatgcgaa gtggacctcg gaccgcgccc ccccgactgc atctgcgtgt 540
tcgaattcgc caatgacaag acgctgggag gggtttgctc gacattgggt ggaaacattc 600
caggcctggg tggagaggct ttttgcttcc tcttgcaaaa ccacactgct cgacattggg 660
tggaacatt ccaggcctgg gtggagaggc ttttgcttc ctcttgaaaa ccacactgct 720
cgatccggaa cccttaatata aacttcgtat aatgtatgct atacgaagtt attaggtccc 780
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<210> 4

<211> 34

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic oligonucleotide

<400> 4

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34

<210> 5
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 5
ccaaggaaga tggctgacc

19

<210> 6
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 6
catcgacgcc tcataaatcc

20

<210> 7
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 7
tcttcataac acacgccaat tt

22

<210> 8
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 8
ccctttgctg ccaattaact att

23

<210> 9
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 9
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<210> 10
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 10
aagttgaata accggaaatg gttt 24

<210> 11
<211> 24
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 11
tggtataagc aatccccaga aatg 24

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 12
aggctcctcg aactctccag 20

<210> 13
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<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 13
gtaagagagc ttccctcctc ctt 23

<210> 14
 <211> 994
 <212> PRT
 <213> Mus musculus

<400> 14

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			20					25					30		
Leu	Glu	Lys	Tyr	Gly	Pro	Asn	Glu	Leu	Pro	Ala	Glu	Glu	Gly	Lys	Ser
		35					40					45			
Leu	Trp	Glu	Leu	Val	Val	Glu	Gln	Phe	Glu	Asp	Leu	Leu	Val	Arg	Ile
	50					55					60				
Leu	Leu	Leu	Ala	Ala	Cys	Ile	Ser	Phe	Val	Leu	Ala	Trp	Phe	Glu	Glu
65					70					75					80
Gly	Glu	Glu	Thr	Val	Thr	Ala	Phe	Val	Glu	Pro	Phe	Val	Ile	Leu	Leu
				85					90					95	
Ile	Leu	Ile	Ala	Asn	Ala	Ile	Val	Gly	Val	Trp	Gln	Glu	Arg	Asn	Ala
			100					105					110		
Glu	Asn	Ala	Ile	Glu	Ala	Leu	Lys	Glu	Tyr	Glu	Pro	Glu	Met	Gly	Lys
	115						120					125			
Val	Tyr	Arg	Ala	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Arg	Asp
	130					135					140				
Ile	Val	Pro	Gly	Asp	Ile	Val	Glu	Val	Ala	Val	Gly	Asp	Lys	Val	Pro
145					150					155					160
Ala	Asp	Ile	Arg	Ile	Leu	Ser	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp
				165				170						175	
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp
		180					185						190		
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu
		195					200					205			
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Val	Gly	Ile	Val	Ala
	210					215					220				
Thr	Thr	Gly	Val	Ser	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Gln	Met	Ala
225					230					235					240
Ala	Thr	Glu	Gln	Asp	Lys	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe
				245					250					255	
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Val	Ala	Val	Trp
			260					265					270		

Leu Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285
 Phe Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320
 Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350
 Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Lys Met Phe Ile
 355 360 365
 Ile Asp Lys Val Asp Gly Asp Val Cys Ser Leu Asn Glu Phe Ser Ile
 370 375 380
 Thr Gly Ser Thr Tyr Ala Pro Glu Gly Glu Val Leu Lys Asn Asp Lys
 385 390 395 400
 Pro Val Arg Ala Gly Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ser Leu Asp Phe Asn Glu Thr Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Thr Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asn Thr Glu Val Arg Ser Leu Ser Lys
 450 455 460
 Val Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Arg Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Ser Pro Ala Lys Ser Ser Arg Ala Ala Val Gly Asn Lys Met
 500 505 510
 Phe Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Asn Tyr Val
 515 520 525
 Arg Val Gly Thr Thr Arg Val Pro Leu Thr Gly Pro Val Lys Glu Lys
 530 535 540
 Ile Met Ser Val Ile Lys Glu Trp Gly Thr Gly Arg Asp Thr Leu Arg
 545 550 555 560
 Cys Leu Ala Leu Ala Thr Arg Asp Thr Pro Pro Lys Arg Glu Glu Met
 565 570 575

Val	Leu	Asp	Asp	Ser	Ala	Lys	Phe	Met	Glu	Tyr	Glu	Met	Asp	Leu	Thr	580	585	590
Phe	Val	Gly	Val	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Lys	Glu	Val	Thr	595	600	605
Gly	Ser	Ile	Gln	Leu	Cys	Arg	Asp	Ala	Gly	Ile	Arg	Val	Ile	Met	Ile	610	615	620
Thr	Gly	Asp	Asn	Lys	Gly	Thr	Ala	Ile	Ala	Ile	Cys	Arg	Arg	Ile	Gly	625	630	635
Ile	Phe	Ser	Glu	Asn	Glu	Glu	Val	Thr	Asp	Arg	Ala	Tyr	Thr	Gly	Arg	645	650	655
Glu	Phe	Asp	Asp	Leu	Pro	Leu	Ala	Glu	Gln	Arg	Glu	Ala	Cys	Arg	Arg	660	665	670
Ala	Cys	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ser	His	Lys	Ser	Lys	Ile	Val	675	680	685
Glu	Tyr	Leu	Gln	Ser	Tyr	Asp	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	690	695	700
Val	Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ala	Glu	Ile	Gly	Ile	Ala	Met	705	710	715
Gly	Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	725	730	735
Asp	Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	740	745	750
Ile	Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	755	760	765
Val	Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ala	Leu	Gly	Leu	Pro	770	775	780
Glu	Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	785	790	795
Gly	Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	805	810	815
Met	Asp	Arg	Pro	Pro	Arg	Ser	Pro	Lys	Glu	Pro	Leu	Ile	Ser	Gly	Trp	820	825	830
Leu	Phe	Phe	Arg	Tyr	Met	Ala	Ile	Gly	Gly	Tyr	Val	Gly	Ala	Ala	Thr	835	840	845
Val	Gly	Ala	Ala	Ala	Trp	Trp	Phe	Leu	Tyr	Ala	Glu	Asp	Gly	Pro	His	850	855	860
Val	Ser	Tyr	His	Gln	Leu	Thr	His	Phe	Met	Gln	Cys	Thr	Glu	His	Asn	865	870	875

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<210> 15
<211> 998
<212> PRT
<213> Mus musculus
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Gly	Val	Asn	Glu	Ser	Thr	Gly	Leu	Ser	Leu	Glu	Gln	Val	Lys	Lys	Leu		
			20					25					30				
Lys	Glu	Arg	Trp	Gly	Ser	Asn	Glu	Leu	Pro	Ala	Glu	Glu	Gly	Lys	Thr		
		35					40					45					
Leu	Leu	Glu	Leu	Val	Ile	Glu	Gln	Phe	Glu	Asp	Leu	Leu	Val	Arg	Ile		
	50					55					60						
Leu	Leu	Leu	Ala	Ala	Cys	Ile	Ser	Phe	Val	Leu	Ala	Trp	Phe	Glu	Glu		
65					70					75						80	
Gly	Glu	Glu	Thr	Ile	Thr	Ala	Phe	Val	Glu	Pro	Phe	Val	Ile	Leu	Leu		
				85					90					95			
Ile	Leu	Val	Ala	Asn	Ala	Ile	Val	Gly	Val	Trp	Gln	Glu	Arg	Asn	Ala		
			100					105					110				
Glu	Asn	Ala	Ile	Glu	Ala	Leu	Lys	Glu	Tyr	Glu	Pro	Glu	Met	Gly	Lys		
		115					120					125					
Val	Tyr	Arg	Gln	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Lys	Asp		
	130					135						140					

Ile Val Pro Gly Asp	Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
145	150 155 160
Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp	
	165 170 175
Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp	
	180 185 190
Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu	
	195 200 205
Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val	
	210 215 220
Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val	
	225 230 235 240
Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe	
	245 250 255
Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp	
	260 265 270
Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp	
	275 280 285
Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val	
	290 295 300
Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala	
	305 310 315 320
Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu	
	325 330 335
Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys	
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Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile	
	355 360 365
Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Ser Ile	
	370 375 380
Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys	
	385 390 395 400
Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile	
	405 410 415
Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly	
	420 425 430
Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu	
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Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys	450	455	460
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys	465	470	475
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val	485	490	495
Tyr	Cys	Thr	Pro	Asn	Lys	Pro	Ser	Arg	Thr	Ser	Met	Ser	Lys	Met	Phe	500	505	510
Val	Lys	Gly	Ala	Pro	Glu	Gly	Val	Ile	Asp	Arg	Cys	Thr	His	Ile	Arg	515	520	525
Val	Gly	Ser	Thr	Lys	Val	Pro	Met	Thr	Pro	Gly	Val	Lys	Gln	Lys	Ile	530	535	540
Met	Ser	Val	Ile	Arg	Glu	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	Cys	545	550	555
Leu	Ala	Leu	Ala	Thr	His	Asp	Asn	Pro	Leu	Lys	Arg	Glu	Glu	Met	His	565	570	575
Leu	Glu	Asp	Ser	Ala	Asn	Phe	Ile	Lys	Tyr	Glu	Thr	Asn	Leu	Thr	Phe	580	585	590
Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Ile	Glu	Val	Ala	Ser	595	600	605
Ser	Val	Lys	Leu	Cys	Arg	Gln	Ala	Gly	Ile	Arg	Val	Ile	Met	Ile	Thr	610	615	620
Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Ile	Gly	Ile	625	630	635
Phe	Gly	Gln	Asp	Glu	Asp	Val	Thr	Ser	Lys	Ala	Phe	Thr	Gly	Arg	Glu	645	650	655
Phe	Asp	Glu	Leu	Ser	Pro	Ser	Ala	Gln	Arg	Asp	Ala	Cys	Leu	Asn	Ala	660	665	670
Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ser	His	Lys	Ser	Lys	Ile	Val	Glu	675	680	685
Phe	Leu	Gln	Ser	Phe	Asp	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	Val	690	695	700
Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ser	Glu	Ile	Gly	Ile	Ala	Met	Gly	705	710	715
Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	Asp	725	730	735
Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	Ile	740	745	750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Asp Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
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 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
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 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
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<210> 16

<211> 1044

<212> PRT

<213> Mus musculus

<400> 16

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 35 40 45
 Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190
 Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220
 Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240
 Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255
 Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270
 Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285
 Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350
 Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365
 Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Ser Ile
 370 375 380
 Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys
 385 390 395 400
 Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Lys Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly 625	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys 635	Arg	Arg	Ile	Gly	Ile 640
Phe	Gly	Gln	Asp	Glu 645	Asp	Val	Thr	Ser	Lys 650	Ala	Phe	Thr	Gly	Arg 655	Glu
Phe	Asp	Glu	Leu 660	Ser	Pro	Ser	Ala	Gln 665	Arg	Asp	Ala	Cys	Leu 670	Asn	Ala
Arg	Cys	Phe 675	Ala	Arg	Val	Glu	Pro 680	Ser	His	Lys	Ser	Lys 685	Ile	Val	Glu
Phe	Leu 690	Gln	Ser	Phe	Asp	Glu 695	Ile	Thr	Ala	Met	Thr 700	Gly	Asp	Gly	Val
Asn 705	Asp	Ala	Pro	Ala	Leu 710	Lys	Lys	Ser	Glu	Ile 715	Gly	Ile	Ala	Met	Gly 720
Ser	Gly	Thr	Ala	Val 725	Ala	Lys	Thr	Ala	Ser 730	Glu	Met	Val	Leu	Ala 735	Asp
Asp	Asn	Phe	Ser 740	Thr	Ile	Val	Ala	Ala 745	Val	Glu	Glu	Gly 750	Arg	Ala	Ile
Tyr	Asn	Asn 755	Met	Lys	Gln	Phe	Ile 760	Arg	Tyr	Leu	Ile	Ser 765	Ser	Asn	Val
Gly	Glu 770	Val	Val	Cys	Ile	Phe 775	Leu	Thr	Ala	Ala 780	Leu	Gly	Phe	Pro	Glu
Ala 785	Leu	Ile	Pro	Val	Gln 790	Leu	Leu	Trp	Val	Asn 795	Leu	Val	Thr	Asp	Gly 800
Leu	Pro	Ala	Thr	Ala 805	Leu	Gly	Phe	Asn	Pro 810	Pro	Asp	Leu	Asp	Ile 815	Met
Asn	Lys	Pro	Pro 820	Arg	Asn	Pro	Lys	Glu 825	Pro	Leu	Ile	Ser	Gly 830	Trp	Leu
Phe	Phe	Arg 835	Tyr	Leu	Ala	Ile	Gly 840	Cys	Tyr	Val	Gly	Ala 845	Ala	Thr	Val
Gly	Ala 850	Ala	Ala	Trp	Trp	Phe 855	Ile	Ala	Ala	Asp	Gly 860	Gly	Pro	Arg	Val
Ser 865	Phe	Tyr	Gln	Leu	Ser 870	His	Phe	Leu	Gln	Cys 875	Lys	Glu	Asp	Asn	Pro 880
Asp	Phe	Asp	Gly	Val 885	Asp	Cys	Ala	Ile	Phe 890	Glu	Ser	Pro	Tyr	Pro 895	Met
Thr	Met	Ala	Leu 900	Ser	Val	Leu	Val	Thr 905	Ile	Glu	Met	Cys	Asn 910	Ala	Leu
Asn	Ser	Leu 915	Ser	Glu	Asn	Gln	Ser 920	Leu	Leu	Arg	Met	Pro 925	Pro	Trp	Glu

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Gln Pro Gly Lys Glu Cys Val Gln Pro Ala Thr Lys Ser Ser Cys Ser
 995 1000 1005

Leu Ser Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile
 1010 1015 1020

Met Pro Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp
 1025 1030 1035 1040

Met Phe Trp Ser

<210> 17

<211> 999

<212> PRT

<213> Mus musculus

<400> 17

Met Glu Glu Ala His Leu Leu Ser Ala Ala Asp Val Leu Arg Arg Phe
 1 5 10 15

Ser Val Thr Ala Glu Gly Gly Leu Ser Leu Glu Gln Val Thr Asp Ala
 20 25 30

Arg Glu Arg Tyr Gly Pro Asn Glu Leu Pro Thr Glu Glu Gly Lys Ser
 35 40 45

Leu Trp Glu Leu Val Val Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Leu Val Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Thr Thr Ala Phe Val Glu Pro Leu Val Ile Met Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Ser Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Ile Arg Ser Asp Arg Lys Gly Val Gln Arg Ile Arg Ala Arg Asp
 130 135 140

Ile Val Pro Gly Asp	Ile Val Glu Val Ala Val Gly Asp Lys Val Pro
145	150 155 160
Ala Asp Leu Arg Leu Ile Glu Ile Lys Ser Thr Thr Leu Arg Val Asp	
165	170 175
Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Thr Lys His Thr Asp	
180	185 190
Ala Ile Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu	
195	200 205
Phe Ser Gly Thr Asn Ile Ala Ser Gly Lys Ala Leu Gly Val Ala Val	
210	215 220
Ala Thr Gly Leu Gln Thr Glu Leu Gly Lys Ile Arg Ser Gln Met Ala	
225	230 235 240
Ala Val Glu Pro Glu Arg Thr Pro Leu Gln Arg Lys Leu Asp Glu Phe	
245	250 255
Gly Arg Gln Leu Ser His Ala Ile Ser Val Ile Cys Val Ala Val Trp	
260	265 270
Val Ile Asn Ile Gly His Phe Ala Asp Pro Ala His Gly Gly Ser Trp	
275	280 285
Leu Arg Gly Ala Val Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val	
290	295 300
Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala	
305	310 315 320
Leu Gly Thr Arg Arg Met Ala Arg Lys Asn Ala Ile Val Arg Ser Leu	
325	330 335
Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys	
340	345 350
Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Val	
355	360 365
Val Ala Glu Ala Glu Ala Gly Thr Cys Arg Leu His Glu Phe Thr Ile	
370	375 380
Ser Gly Thr Thr Tyr Thr Pro Glu Gly Glu Val Arg Gln Gly Glu Gln	
385	390 395 400
Pro Val Arg Cys Gly Gln Phe Asp Gly Leu Val Glu Leu Ala Thr Ile	
405	410 415
Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly	
420	425 430
Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu	
435	440 445

Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Asp	Leu	Lys	Gly	Leu	Ser	Arg	
450						455					460					
Val	Glu	Arg	Ala	Gly	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Arg	
465					470					475					480	
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val	
				485					490					495		
Tyr	Cys	Thr	Pro	Thr	Arg	Ala	Asp	Pro	Lys	Val	Gln	Ser	Ser	Lys	Met	
			500					505						510		
Phe	Val	Lys	Gly	Ala	Pro	Glu	Ser	Val	Ile	Glu	Arg	Cys	Ser	Ser	Val	
		515					520					525				
Arg	Val	Gly	Ser	Arg	Thr	Ala	Pro	Leu	Ser	Thr	Thr	Ser	Arg	Glu	His	
		530				535					540					
Ile	Leu	Ala	Lys	Ile	Arg	Asp	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	
545					550					555					560	
Cys	Leu	Ala	Leu	Ala	Thr	Arg	Asp	Thr	Pro	Pro	Arg	Lys	Glu	Asp	Met	
				565					570					575		
His	Leu	Asp	Asp	Cys	Ser	Arg	Phe	Val	Gln	Tyr	Glu	Thr	Asp	Leu	Thr	
			580					585					590			
Phe	Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Pro	Glu	Val	Ala	
		595					600					605				
Ala	Cys	Val	Thr	Arg	Cys	Ser	Arg	Ala	Gly	Ile	Arg	Val	Val	Met	Ile	
		610				615					620					
Thr	Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Leu	Gly	
625					630					635					640	
Ile	Phe	Gly	Asp	Thr	Glu	Asp	Val	Leu	Gly	Lys	Ala	Tyr	Thr	Gly	Arg	
				645					650					655		
Glu	Phe	Asp	Asp	Leu	Ser	Pro	Glu	Gln	Gln	Arg	Gln	Ala	Cys	Arg	Thr	
			660					665					670			
Ala	Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ala	His	Lys	Ser	Arg	Ile	Val	
		675					680					685				
Glu	Asn	Leu	Gln	Ser	Phe	Asn	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	
		690				695					700					
Val	Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ala	Glu	Ile	Gly	Ile	Ala	Met	
705					710					715					720	
Gly	Ser	Gly	Thr	Ala	Val	Ala	Lys	Ser	Ala	Ala	Glu	Met	Val	Leu	Ser	
				725					730					735		
Asp	Asp	Asn	Phe	Ala	Ser	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	
			740					745					750			

Ile Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn
 755 760 765
 Val Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ile Leu Gly Leu Pro
 770 775 780
 Glu Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp
 785 790 795 800
 Gly Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile
 805 810 815
 Met Glu Lys Pro Pro Arg Asn Pro Arg Glu Ala Leu Ile Ser Gly Trp
 820 825 830
 Leu Phe Phe Arg Tyr Leu Ala Ile Gly Val Tyr Val Gly Leu Ala Thr
 835 840 845
 Val Ala Ala Ala Thr Trp Trp Phe Ile Ala Asp Ala Glu Gly Pro Gln
 850 855 860
 Val Thr Phe Tyr Gln Leu Arg Asn Phe Leu Lys Cys Ser Glu Asp Asn
 865 870 875 880
 Pro Leu Phe Ala Gly Ile Asp Cys Lys Val Phe Glu Ser Arg Phe Pro
 885 890 895
 Thr Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala
 900 905 910
 Leu Ash Ser Val Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp
 915 920 925
 Leu Asn Pro Trp Leu Leu Gly Ala Val Val Met Ser Met Ala Leu His
 930 935 940
 Phe Leu Ile Leu Leu Val Pro Pro Leu Pro Leu Ile Phe Gln Val Thr
 945 950 955 960
 Pro Leu Ser Gly Arg Gln Trp Gly Val Val Leu Gln Met Ser Leu Pro
 965 970 975
 Val Ile Leu Met Asp Glu Ala Leu Lys Tyr Leu Ser Arg Asn His Met
 980 985 990
 Asp Glu Lys Lys Asp Leu Lys
 995

<210> 18

<211> 1038

<212> PRT

<213> Mus musculus

<400> 18

Met Glu Glu Ala His Leu Leu Ser Ala Ala Asp Val Leu Arg Arg Phe
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Ser Val Thr Ala Glu Gly Gly Leu Ser Leu Glu Gln Val Thr Asp Ala
 20 25 30
 Arg Glu Arg Tyr Gly Pro Asn Glu Leu Pro Thr Glu Glu Gly Lys Ser
 35 40 45
 Leu Trp Glu Leu Val Val Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Leu Val Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Thr Thr Ala Phe Val Glu Pro Leu Val Ile Met Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Ser Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Ile Arg Ser Asp Arg Lys Gly Val Gln Arg Ile Arg Ala Arg Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Val Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Leu Arg Leu Ile Glu Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Thr Lys His Thr Asp
 180 185 190
 Ala Ile Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ser Gly Lys Ala Leu Gly Val Ala Val
 210 215 220
 Ala Thr Gly Leu Gln Thr Glu Leu Gly Lys Ile Arg Ser Gln Met Ala
 225 230 235 240
 Ala Val Glu Pro Glu Arg Thr Pro Leu Gln Arg Lys Leu Asp Glu Phe
 245 250 255
 Gly Arg Gln Leu Ser His Ala Ile Ser Val Ile Cys Val Ala Val Trp
 260 265 270
 Val Ile Asn Ile Gly His Phe Ala Asp Pro Ala His Gly Gly Ser Trp
 275 280 285
 Leu Arg Gly Ala Val Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Arg Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350
 Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Val
 355 360 365
 Val Ala Glu Ala Glu Ala Gly Thr Cys Arg Leu His Glu Phe Thr Ile
 370 375 380
 Ser Gly Thr Thr Tyr Thr Pro Glu Gly Glu Val Arg Gln Gly Glu Gln
 385 390 395 400
 Pro Val Arg Cys Gly Gln Phe Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Asp Leu Lys Gly Leu Ser Arg
 450 455 460
 Val Glu Arg Ala Gly Ala Cys Asn Ser Val Ile Lys Gln Leu Met Arg
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Thr Arg Ala Asp Pro Lys Val Gln Ser Ser Lys Met
 500 505 510
 Phe Val Lys Gly Ala Pro Glu Ser Val Ile Glu Arg Cys Ser Ser Val
 515 520 525
 Arg Val Gly Ser Arg Thr Ala Pro Leu Ser Thr Thr Ser Arg Glu His
 530 535 540
 Ile Leu Ala Lys Ile Arg Asp Trp Gly Ser Gly Ser Asp Thr Leu Arg
 545 550 555 560
 Cys Leu Ala Leu Ala Thr Arg Asp Thr Pro Pro Arg Lys Glu Asp Met
 565 570 575
 His Leu Asp Asp Cys Ser Arg Phe Val Gln Tyr Glu Thr Asp Leu Thr
 580 585 590
 Phe Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Pro Glu Val Ala
 595 600 605
 Ala Cys Val Thr Arg Cys Ser Arg Ala Gly Ile Arg Val Val Met Ile
 610 615 620

Thr	Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Leu	Gly	
625					630					635					640	
Ile	Phe	Gly	Asp	Thr	Glu	Asp	Val	Leu	Gly	Lys	Ala	Tyr	Thr	Gly	Arg	
				645					650					655		
Glu	Phe	Asp	Asp	Leu	Ser	Pro	Glu	Gln	Gln	Arg	Gln	Ala	Cys	Arg	Thr	
			660					665					670			
Ala	Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ala	His	Lys	Ser	Arg	Ile	Val	
		675					680					685				
Glu	Asn	Leu	Gln	Ser	Phe	Asn	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	
	690					695					700					
Val	Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ala	Glu	Ile	Gly	Ile	Ala	Met	
705					710					715					720	
Gly	Ser	Gly	Thr	Ala	Val	Ala	Lys	Ser	Ala	Ala	Glu	Met	Val	Leu	Ser	
			725						730					735		
Asp	Asp	Asn	Phe	Ala	Ser	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	
			740					745					750			
Ile	Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	
	755						760					765				
Val	Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ile	Leu	Gly	Leu	Pro	
	770					775					780					
Glu	Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	
785					790					795					800	
Gly	Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	
				805					810					815		
Met	Glu	Lys	Pro	Pro	Arg	Asn	Pro	Arg	Glu	Ala	Leu	Ile	Ser	Gly	Trp	
			820					825					830			
Leu	Phe	Phe	Arg	Tyr	Leu	Ala	Ile	Gly	Val	Tyr	Val	Gly	Leu	Ala	Thr	
	835						840					845				
Val	Ala	Ala	Ala	Thr	Trp	Trp	Phe	Ile	Ala	Asp	Ala	Glu	Gly	Pro	Gln	
	850					855					860					
Val	Thr	Phe	Tyr	Gln	Leu	Arg	Asn	Phe	Leu	Lys	Cys	Ser	Glu	Asp	Asn	
865					870					875					880	
Pro	Leu	Phe	Ala	Gly	Ile	Asp	Cys	Lys	Val	Phe	Glu	Ser	Arg	Phe	Pro	
				885					890					895		
Thr	Thr	Met	Ala	Leu	Ser	Val	Leu	Val	Thr	Ile	Glu	Met	Cys	Asn	Ala	
			900					905					910			
Leu	Asn	Ser	Val	Ser	Glu	Asn	Gln	Ser	Leu	Leu	Arg	Met	Pro	Pro	Trp	
	915						920					925				

Leu Asn Pro Trp Leu Leu Gly Ala Val Val Met Ser Met Ala Leu His
 930 935 940
 Phe Leu Ile Leu Leu Val Pro Pro Leu Pro Leu Ile Phe Gln Val Thr
 945 950 955 960
 Pro Leu Ser Gly Arg Gln Trp Gly Val Val Leu Gln Met Ser Leu Pro
 965 970 975
 Val Ile Leu Met Asp Glu Ala Leu Lys Tyr Leu Ser Arg Asn His Met
 980 985 990
 Asp Glu Val Leu Gly Thr Phe Met Gln Ala Arg Ser Arg Gln Leu Pro
 995 1000 1005
 Thr Thr Ser Arg Thr Pro Tyr His Thr Gly Lys Lys Gly Pro Glu Val
 1010 1015 1020
 Asn Pro Gly Ser Arg Gly Glu Ser Pro Val Trp Pro Ser Asp
 1025 1030 1035

<210> 19
 <211> 1026
 <212> PRT
 <213> Mus musculus

<400> 19
 Met Glu Glu Ala His Leu Leu Ser Ala Ala Asp Val Leu Arg Arg Phe
 1 5 10 15
 Ser Val Thr Ala Glu Gly Gly Leu Ser Leu Glu Gln Val Thr Asp Ala
 20 25 30
 Arg Glu Arg Tyr Gly Pro Asn Glu Leu Pro Thr Glu Glu Gly Lys Ser
 35 40 45
 Leu Trp Glu Leu Val Val Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Leu Val Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Thr Thr Ala Phe Val Glu Pro Leu Val Ile Met Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Ser Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Ile Arg Ser Asp Arg Lys Gly Val Gln Arg Ile Arg Ala Arg Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Val Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala	Asp	Leu	Arg	Leu	Ile	Glu	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp	165	170	175
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Thr	Lys	His	Thr	Asp	180	185	190
Ala	Ile	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu	195	200	205
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ser	Gly	Lys	Ala	Leu	Gly	Val	Ala	Val	210	215	220
Ala	Thr	Gly	Leu	Gln	Thr	Glu	Leu	Gly	Lys	Ile	Arg	Ser	Gln	Met	Ala	225	230	235
Ala	Val	Glu	Pro	Glu	Arg	Thr	Pro	Leu	Gln	Arg	Lys	Leu	Asp	Glu	Phe	245	250	255
Gly	Arg	Gln	Leu	Ser	His	Ala	Ile	Ser	Val	Ile	Cys	Val	Ala	Val	Trp	260	265	270
Val	Ile	Asn	Ile	Gly	His	Phe	Ala	Asp	Pro	Ala	His	Gly	Gly	Ser	Trp	275	280	285
Leu	Arg	Gly	Ala	Val	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val	290	295	300
Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala	305	310	315
Leu	Gly	Thr	Arg	Arg	Met	Ala	Arg	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu	325	330	335
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys	340	345	350
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Val	355	360	365
Val	Ala	Glu	Ala	Glu	Ala	Gly	Thr	Cys	Arg	Leu	His	Glu	Phe	Thr	Ile	370	375	380
Ser	Gly	Thr	Thr	Tyr	Thr	Pro	Glu	Gly	Glu	Val	Arg	Gln	Gly	Glu	Gln	385	390	395
Pro	Val	Arg	Cys	Gly	Gln	Phe	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile	405	410	415
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly	420	425	430
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu	435	440	445
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Asp	Leu	Lys	Gly	Leu	Ser	Arg	450	455	460

Val	Glu	Arg	Ala	Gly	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Arg	
465					470					475					480	
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val	
				485					490					495		
Tyr	Cys	Thr	Pro	Thr	Arg	Ala	Asp	Pro	Lys	Val	Gln	Ser	Ser	Lys	Met	
			500					505					510			
Phe	Val	Lys	Gly	Ala	Pro	Glu	Ser	Val	Ile	Glu	Arg	Cys	Ser	Ser	Val	
		515					520					525				
Arg	Val	Gly	Ser	Arg	Thr	Ala	Pro	Leu	Ser	Thr	Thr	Ser	Arg	Glu	His	
		530				535					540					
Ile	Leu	Ala	Lys	Ile	Arg	Asp	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	
545					550					555					560	
Cys	Leu	Ala	Leu	Ala	Thr	Arg	Asp	Thr	Pro	Pro	Arg	Lys	Glu	Asp	Met	
			565						570					575		
His	Leu	Asp	Asp	Cys	Ser	Arg	Phe	Val	Gln	Tyr	Glu	Thr	Asp	Leu	Thr	
			580					585					590			
Phe	Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Pro	Glu	Val	Ala	
		595					600					605				
Ala	Cys	Val	Thr	Arg	Cys	Ser	Arg	Ala	Gly	Ile	Arg	Val	Val	Met	Ile	
		610				615					620					
Thr	Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Leu	Gly	
625					630					635					640	
Ile	Phe	Gly	Asp	Thr	Glu	Asp	Val	Leu	Gly	Lys	Ala	Tyr	Thr	Gly	Arg	
				645					650					655		
Glu	Phe	Asp	Asp	Leu	Ser	Pro	Glu	Gln	Gln	Arg	Gln	Ala	Cys	Arg	Thr	
			660					665					670			
Ala	Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ala	His	Lys	Ser	Arg	Ile	Val	
		675					680					685				
Glu	Asn	Leu	Gln	Ser	Phe	Asn	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	
	690					695					700					
Val	Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ala	Glu	Ile	Gly	Ile	Ala	Met	
705					710					715					720	
Gly	Ser	Gly	Thr	Ala	Val	Ala	Lys	Ser	Ala	Ala	Glu	Met	Val	Leu	Ser	
				725					730					735		
Asp	Asp	Asn	Phe	Ala	Ser	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	
			740					745					750			
Ile	Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	
		755					760					765				

Val Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ile Leu Gly Leu Pro
 770 775 780
 Glu Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp
 785 790 795 800
 Gly Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile
 805 810 815
 Met Glu Lys Pro Pro Arg Asn Pro Arg Glu Ala Leu Ile Ser Gly Trp
 820 825 830
 Leu Phe Phe Arg Tyr Leu Ala Ile Gly Val Tyr Val Gly Leu Ala Thr
 835 840 845
 Val Ala Ala Ala Thr Trp Trp Phe Ile Ala Asp Ala Glu Gly Pro Gln
 850 855 860
 Val Thr Phe Tyr Gln Leu Arg Asn Phe Leu Lys Cys Ser Glu Asp Asn
 865 870 875 880
 Pro Leu Phe Ala Gly Ile Asp Cys Lys Val Phe Glu Ser Arg Phe Pro
 885 890 895
 Thr Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala
 900 905 910
 Leu Asn Ser Val Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp
 915 920 925
 Leu Asn Pro Trp Leu Leu Gly Ala Val Val Met Ser Met Ala Leu His
 930 935 940
 Phe Leu Ile Leu Leu Val Pro Pro Leu Pro Leu Ile Phe Gln Val Thr
 945 950 955 960
 Pro Leu Ser Gly Arg Gln Trp Gly Val Val Leu Gln Met Ser Leu Pro
 965 970 975
 Val Ile Leu Met Asp Glu Ala Leu Lys Tyr Leu Ser Arg Asn His Met
 980 985 990
 Asp Glu Val Leu Gly Thr Phe Met Gln Ala Arg Ser Arg Gln Leu Pro
 995 1000 1005
 Thr Thr Ser Arg Thr Pro Tyr His Thr Gly Leu Ala Ser Trp Lys Lys
 1010 1015 1020
 Arg Thr
 1025

<210> 20

<211> 998

<212> PRT

<213> Mus musculus

<400> 20

Met	Glu	Asn	Ala	His	Thr	Lys	Thr	Val	Glu	Glu	Val	Leu	Gly	His	Phe
1				5					10					15	
Gly	Val	Asn	Glu	Ser	Thr	Gly	Leu	Ser	Leu	Glu	Gln	Val	Lys	Lys	Leu
		20					25						30		
Lys	Glu	Arg	Trp	Gly	Ser	Asn	Glu	Leu	Pro	Ala	Glu	Glu	Gly	Lys	Thr
		35					40					45			
Leu	Leu	Glu	Leu	Val	Ile	Glu	Gln	Phe	Glu	Asp	Leu	Leu	Val	Arg	Ile
	50					55					60				
Leu	Leu	Leu	Ala	Ala	Cys	Ile	Ser	Phe	Val	Leu	Ala	Trp	Phe	Glu	Glu
	65				70					75					80
Gly	Glu	Glu	Thr	Ile	Thr	Ala	Phe	Val	Glu	Pro	Phe	Val	Ile	Leu	Leu
				85					90					95	
Ile	Leu	Val	Ala	Asn	Ala	Ile	Val	Gly	Val	Trp	Gln	Glu	Arg	Asn	Ala
		100						105					110		
Glu	Asn	Ala	Ile	Glu	Ala	Leu	Lys	Glu	Tyr	Glu	Pro	Glu	Met	Gly	Lys
		115					120					125			
Val	Tyr	Arg	Gln	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Lys	Asp
	130					135					140				
Ile	Val	Pro	Gly	Asp	Ile	Val	Glu	Ile	Ala	Val	Gly	Asp	Lys	Val	Pro
145					150					155					160
Ala	Asp	Ile	Arg	Leu	Thr	Ser	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp
				165					170					175	
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp
		180						185					190		
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu
		195					200					205			
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Met	Gly	Val	Val	Val
	210					215					220				
Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val
225					230					235					240
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe
				245					250					255	
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp
		260						265					270		
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp
		275					280					285			
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val
	290					295					300				

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320
 Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350
 Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365
 Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Ser Ile
 370 375 380
 Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys
 385 390 395 400
 Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Lys Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Asp Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Gln Pro Ala Ile Leu Glu
 995

<210> 21

<211> 1044

<212> PRT

<213> Mus musculus

<400> 21

Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
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Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp	
			180					185					190			
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu	
		195					200					205				
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Met	Gly	Val	Val	Val	
	210					215					220					
Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val	
225					230					235					240	
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe	
			245						250					255		
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp	
		260						265					270			
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp	
		275					280					285				
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val	
	290					295					300					
Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala	
305					310					315					320	
Leu	Gly	Thr	Arg	Arg	Met	Ala	Lys	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu	
			325						330					335		
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys	
		340						345					350			
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile	
		355				360						365				
Leu	Asp	Lys	Val	Glu	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Ser	Ile	
	370					375					380					
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	Gln	Lys	Asp	Asp	Lys	
385					390					395					400	
Pro	Val	Lys	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile	
			405						410					415		
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly	
		420						425					430			
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu	
		435					440					445				
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys	
	450					455					460					
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys	
465					470					475					480	

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Lys Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Asp Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Gln Pro Gly Lys Glu Cys Val Gln Pro Ala Thr Lys Ser Ser Cys Ser
 995 1000 1005
 Leu Ser Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile
 1010 1015 1020
 Met Pro Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp
 1025 1030 1035 1040
 Met Phe Trp Ser

<210> 22

<211> 1043

<212> PRT

<213> Rattus norvegicus

<400> 22

Met	Glu	Asn	Ala	His	Thr	Lys	Thr	Val	Glu	Glu	Val	Leu	Gly	His	Phe
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Gly	Val	Asn	Glu	Ser	Thr	Gly	Leu	Ser	Leu	Glu	Gln	Val	Lys	Lys	Leu
		20					25						30		
Lys	Glu	Arg	Trp	Gly	Ser	Asn	Glu	Leu	Pro	Ala	Glu	Glu	Gly	Lys	Thr
		35					40					45			
Leu	Leu	Glu	Leu	Val	Ile	Glu	Gln	Phe	Glu	Asp	Leu	Leu	Val	Arg	Ile
	50					55					60				
Leu	Leu	Leu	Ala	Ala	Cys	Ile	Ser	Phe	Val	Leu	Ala	Trp	Phe	Glu	Glu
	65				70					75					80
Gly	Glu	Glu	Thr	Ile	Thr	Ala	Phe	Val	Glu	Pro	Phe	Val	Ile	Leu	Leu
				85					90					95	
Ile	Leu	Val	Ala	Asn	Ala	Ile	Val	Gly	Val	Trp	Gln	Glu	Arg	Asn	Ala
		100						105					110		
Glu	Asn	Ala	Ile	Glu	Ala	Leu	Lys	Glu	Tyr	Glu	Pro	Glu	Met	Gly	Lys
		115					120					125			
Val	Tyr	Arg	Gln	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Lys	Asp
	130					135					140				
Ile	Val	Pro	Gly	Asp	Ile	Val	Glu	Ile	Ala	Val	Gly	Asp	Lys	Val	Pro
	145				150					155					160
Ala	Asp	Ile	Arg	Leu	Thr	Ser	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp
				165					170					175	
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp
		180					185						190		
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu
		195					200					205			
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Met	Gly	Val	Val	Val
	210					215					220				
Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val
	225				230					235					240
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe
				245					250					255	
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp
			260					265					270		
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp
		275					280					285			
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val
	290					295					300				

Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala	305	310	315	320
Leu	Gly	Thr	Arg	Arg	Met	Ala	Lys	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu	325	330	335	
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys	340	345	350	
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile	355	360	365	
Leu	Asp	Lys	Val	Glu	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile	370	375	380	
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	Gln	Lys	Asp	Asp	Lys	385	390	395	400
Pro	Val	Lys	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile	405	410	415	
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly	420	425	430	
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu	435	440	445	
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys	450	455	460	
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys	465	470	475	480
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val	485	490	495	
Tyr	Cys	Thr	Pro	Asn	Lys	Pro	Ser	Arg	Thr	Ser	Met	Ser	Lys	Met	Phe	500	505	510	
Val	Lys	Gly	Ala	Pro	Glu	Gly	Val	Ile	Asp	Arg	Cys	Thr	His	Ile	Arg	515	520	525	
Val	Gly	Ser	Thr	Lys	Val	Pro	Met	Thr	Pro	Gly	Val	Lys	Gln	Lys	Ile	530	535	540	
Met	Ser	Val	Ile	Arg	Glu	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	Cys	545	550	555	560
Leu	Ala	Leu	Ala	Thr	His	Asp	Asn	Pro	Leu	Arg	Arg	Glu	Glu	Met	His	565	570	575	
Leu	Glu	Asp	Ser	Ala	Asn	Phe	Ile	Lys	Tyr	Glu	Thr	Asn	Leu	Thr	Phe	580	585	590	
Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Ile	Glu	Val	Ala	Ser	595	600	605	

Ser	Val	Lys	Leu	Cys	Arg	Gln	Ala	Gly	Ile	Arg	Val	Ile	Met	Ile	Thr	610	615	620
Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Ile	Gly	Ile	625	630	635
Phe	Gly	Gln	Asp	Glu	Asp	Val	Thr	Ser	Lys	Ala	Phe	Thr	Gly	Arg	Glu	645	650	655
Phe	Asp	Glu	Leu	Ser	Pro	Ser	Ala	Gln	Arg	Asp	Ala	Cys	Leu	Asn	Ala	660	665	670
Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ser	His	Lys	Ser	Lys	Ile	Val	Glu	675	680	685
Phe	Leu	Gln	Ser	Phe	Asp	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	Val	690	695	700
Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ser	Glu	Ile	Gly	Ile	Ala	Met	Gly	705	710	715
Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	Asp	725	730	735
Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	Ile	740	745	750
Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	Val	755	760	765
Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ala	Leu	Gly	Phe	Pro	Glu	770	775	780
Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	Gly	785	790	795
Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	Met	805	810	815
Asn	Lys	Pro	Pro	Arg	Asn	Pro	Lys	Glu	Pro	Leu	Ile	Ser	Gly	Trp	Leu	820	825	830
Phe	Phe	Arg	Tyr	Leu	Ala	Ile	Gly	Cys	Tyr	Val	Gly	Ala	Ala	Thr	Val	835	840	845
Gly	Ala	Ala	Ala	Trp	Trp	Phe	Ile	Ala	Ala	Asp	Gly	Gly	Pro	Arg	Val	850	855	860
Ser	Phe	Tyr	Gln	Leu	Ser	His	Phe	Leu	Gln	Cys	Lys	Glu	Asp	Asn	Pro	865	870	875
Asp	Phe	Glu	Gly	Val	Asp	Cys	Ala	Ile	Phe	Glu	Ser	Pro	Tyr	Pro	Met	885	890	895
Thr	Met	Ala	Leu	Ser	Val	Leu	Val	Thr	Ile	Glu	Met	Cys	Asn	Ala	Leu	900	905	910

[illegible]

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<210> 23
<211> 997
<212> PRT
<213> Rattus norvegicus
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<400> 23
Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
  1          5          10          15
Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
          20          25          30
Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
          35          40          45
Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
          50          55          60
Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
          65          70          75          80
Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
          85          90          95
Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
          100          105          110
Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
          115          120          125

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Val	Tyr	Arg	Gln	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Lys	Asp	
130						135					140					
Ile	Val	Pro	Gly	Asp	Ile	Val	Glu	Ile	Ala	Val	Gly	Asp	Lys	Val	Pro	
145					150					155					160	
Ala	Asp	Ile	Arg	Leu	Thr	Ser	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp	
				165					170					175		
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp	
			180					185					190			
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu	
		195					200					205				
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Met	Gly	Val	Val	Val	
210						215					220					
Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val	
225					230					235					240	
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe	
				245					250					255		
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp	
			260					265					270			
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp	
		275					280					285				
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val	
	290					295					300					
Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala	
305					310					315					320	
Leu	Gly	Thr	Arg	Arg	Met	Ala	Lys	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu	
				325					330					335		
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys	
			340					345					350			
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile	
		355					360					365				
Leu	Asp	Lys	Val	Glu	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile	
	370					375					380					
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	Gln	Lys	Asp	Asp	Lys	
385					390					395					400	
Pro	Val	Lys	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile	
				405					410					415		
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly	
		420						425					430			

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
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 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
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 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
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 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
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 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Ala Ile Leu Glu
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<210> 24

<211> 997

<212> PRT

<213> Canis familiaris

<400> 24

Met	Glu	Asn	Ala	His	Thr	Lys	Thr	Val	Glu	Glu	Val	Leu	Gly	His	Phe
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Gly	Val	Asn	Glu	Ser	Thr	Gly	Leu	Ser	Leu	Glu	Gln	Val	Lys	Lys	Leu
		20					25						30		
Lys	Glu	Arg	Trp	Gly	Ser	Asn	Glu	Leu	Pro	Ala	Glu	Glu	Gly	Lys	Thr
		35					40					45			
Leu	Leu	Glu	Leu	Val	Ile	Glu	Gln	Phe	Glu	Asp	Leu	Leu	Val	Arg	Ile
	50					55					60				
Leu	Leu	Leu	Ala	Ala	Cys	Ile	Ser	Phe	Val	Leu	Ala	Trp	Phe	Glu	Glu
65					70					75					80
Gly	Glu	Glu	Thr	Ile	Thr	Ala	Phe	Val	Glu	Pro	Phe	Val	Ile	Leu	Leu
				85					90					95	
Ile	Leu	Val	Ala	Asn	Ala	Ile	Val	Gly	Val	Trp	Gln	Glu	Arg	Asn	Ala
		100						105					110		
Glu	Asn	Ala	Ile	Glu	Ala	Leu	Lys	Glu	Tyr	Glu	Pro	Glu	Met	Gly	Lys
	115						120					125			
Val	Tyr	Arg	Gln	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Lys	Asp
	130					135					140				
Ile	Val	Pro	Gly	Asp	Ile	Val	Glu	Ile	Ala	Val	Gly	Asp	Lys	Val	Pro
145					150					155					160
Ala	Asp	Ile	Arg	Leu	Thr	Ser	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp
			165						170					175	
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp
		180					185						190		
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu
		195					200					205			
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Met	Gly	Val	Val	Val
	210					215					220				
Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val
225					230					235					240
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe
			245						250					255	
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp
		260						265					270		
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp
		275					280					285			
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val
	290					295					300				

Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala	305	310	315	320
Leu	Gly	Thr	Arg	Arg	Met	Ala	Lys	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu	325	330	335	
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys	340	345	350	
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile	355	360	365	
Leu	Asp	Arg	Val	Glu	Gly	Asp	Ser	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile	370	375	380	
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	His	Lys	Asp	Asp	Lys	385	390	395	400
Pro	Val	Lys	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile	405	410	415	
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly	420	425	430	
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu	435	440	445	
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys	450	455	460	
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys	465	470	475	480
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val	485	490	495	
Tyr	Cys	Thr	Pro	Asn	Lys	Pro	Ser	Arg	Thr	Ser	Met	Ser	Lys	Met	Phe	500	505	510	
Val	Lys	Gly	Ala	Pro	Glu	Gly	Val	Ile	Asp	Arg	Cys	Thr	His	Ile	Arg	515	520	525	
Val	Gly	Ser	Thr	Lys	Val	Pro	Met	Thr	Pro	Gly	Val	Lys	Gln	Lys	Val	530	535	540	
Met	Ser	Val	Ile	Arg	Glu	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	Cys	545	550	555	560
Leu	Ala	Leu	Ala	Thr	His	Asp	Asn	Pro	Leu	Arg	Arg	Glu	Glu	Met	Asn	565	570	575	
Leu	Glu	Asp	Ser	Ala	Asn	Phe	Ile	Lys	Tyr	Glu	Thr	Asn	Leu	Thr	Phe	580	585	590	
Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Ile	Glu	Val	Ala	Ser	595	600	605	

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Asp Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
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Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Pro Ala Ile Leu Glu
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<210> 25

<211> 997

<212> PRT

<213> Felis catus

<400> 25

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Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190
 Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220
 Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240
 Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255
 Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270
 Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285
 Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320
 Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350
 Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365
 Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380
 Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400
 Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Lys Lys Phe Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
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 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Val
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met Asn
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
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 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
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 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
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 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Asp Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
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 Pro Ala Ile Leu Glu
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<400> 26
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 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190
 Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220
 Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240
 Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255
 Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270
 Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285
 Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
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 Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile		
		355					360					365					
Leu	Asp	Lys	Val	Glu	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile		
	370					375					380						
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	His	Lys	Asp	Asp	Lys		
385					390					395					400		
Pro	Val	Lys	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile		
				405					410						415		
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly		
			420					425					430				
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu		
	435						440					445					
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys		
	450					455					460						
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys		
465				470						475					480		
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val		
				485					490					495			
Tyr	Cys	Thr	Pro	Asn	Lys	Pro	Ser	Arg	Thr	Ser	Met	Ser	Lys	Met	Phe		
			500					505					510				
Val	Lys	Gly	Ala	Pro	Glu	Gly	Val	Ile	Asp	Arg	Cys	Thr	His	Ile	Arg		
	515						520					525					
Val	Gly	Ser	Thr	Lys	Val	Pro	Met	Thr	Pro	Gly	Val	Lys	Gln	Lys	Ile		
	530					535					540						
Met	Ser	Val	Ile	Arg	Glu	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	Cys		
545					550					555					560		
Leu	Ala	Leu	Ala	Thr	His	Asp	Asn	Pro	Met	Arg	Arg	Glu	Glu	Met	Asn		
				565					570					575			
Leu	Glu	Asp	Ser	Ala	Asn	Phe	Ile	Lys	Tyr	Glu	Thr	Asn	Leu	Thr	Phe		
			580					585					590				
Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Ile	Glu	Val	Ala	Ser		
	595						600					605					
Ser	Val	Lys	Leu	Cys	Arg	Gln	Ala	Gly	Ile	Arg	Val	Ile	Met	Ile	Thr		
	610					615					620						
Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Ile	Gly	Ile		
625					630					635				640			
Phe	Gly	Gln	Asp	Glu	Asp	Val	Thr	Ser	Lys	Ala	Phe	Thr	Gly	Arg	Glu		
				645					650					655			

Phe	Asp	Glu	Leu	Asn	Pro	Ser	Ala	Gln	Arg	Glu	Ala	Cys	Leu	Asn	Ala			660	665	670
Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ser	His	Lys	Ser	Lys	Ile	Val	Glu			675	680	685
Phe	Leu	Gln	Ser	Phe	Asp	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	Val			690	695	700
Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ser	Glu	Ile	Gly	Ile	Ala	Met	Gly			705	710	715
Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	Asp			725	730	735
Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	Ile			740	745	750
Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	Val			755	760	765
Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ala	Leu	Gly	Phe	Pro	Glu			770	775	780
Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	Gly			785	790	795
Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	Met			805	810	815
Asn	Lys	Pro	Pro	Arg	Asn	Pro	Lys	Glu	Pro	Leu	Ile	Ser	Gly	Trp	Leu			820	825	830
Phe	Phe	Arg	Tyr	Leu	Ala	Ile	Gly	Cys	Tyr	Val	Gly	Ala	Ala	Thr	Val			835	840	845
Gly	Ala	Ala	Ala	Trp	Trp	Phe	Ile	Ala	Ala	Asp	Gly	Gly	Pro	Arg	Val			850	855	860
Thr	Phe	Tyr	Gln	Leu	Ser	His	Phe	Leu	Gln	Cys	Lys	Glu	Asp	Asn	Pro			865	870	875
Asp	Phe	Glu	Gly	Val	Asp	Cys	Ala	Val	Phe	Glu	Ser	Pro	Tyr	Pro	Met			885	890	895
Thr	Met	Ala	Leu	Ser	Val	Leu	Val	Thr	Ile	Glu	Met	Cys	Asn	Ala	Leu			900	905	910
Asn	Ser	Leu	Ser	Glu	Asn	Gln	Ser	Leu	Leu	Arg	Met	Pro	Pro	Trp	Glu			915	920	925
Asn	Ile	Trp	Leu	Val	Gly	Ser	Ile	Cys	Leu	Ser	Met	Ser	Leu	His	Phe			930	935	940
Leu	Ile	Leu	Tyr	Val	Glu	Pro	Leu	Pro	Leu	Ile	Phe	Gln	Ile	Thr	Pro			945	950	955

50

Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
980 985 990

Pro Ala Ile Leu Glu
995

<210> 27
<211> 1042
<212> PRT
<213> Sus scrofa

<400> 27
Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
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Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val	225	230	235	240
Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe		245	250	255
Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp		260	265	270
Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp		275	280	285
Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val		290	295	300
Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala	305	310	315	320
Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu		325	330	335
Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys		340	345	350
Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile		355	360	365
Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile		370	375	380
Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys	385	390	395	400
Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile		405	410	415
Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly		420	425	430
Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu		435	440	445
Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys		450	455	460
Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys	465	470	475	480
Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val		485	490	495
Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe		500	505	510
Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg		515	520	525

Val	Gly	Ser	Thr	Lys	Val	Pro	Met	Thr	Pro	Gly	Val	Lys	Gln	Lys	Ile
530						535					540				
Met	Ser	Val	Ile	Arg	Glu	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	Cys
545					550					555					560
Leu	Ala	Leu	Ala	Thr	His	Asp	Asn	Pro	Met	Arg	Arg	Glu	Glu	Met	Asn
				565					570					575	
Leu	Glu	Asp	Ser	Ala	Asn	Phe	Ile	Lys	Tyr	Glu	Thr	Asn	Leu	Thr	Phe
			580					585					590		
Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Ile	Glu	Val	Ala	Ser
		595					600					605			
Ser	Val	Lys	Leu	Cys	Arg	Gln	Ala	Gly	Ile	Arg	Val	Ile	Met	Ile	Thr
	610					615					620				
Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Ile	Gly	Ile
625					630					635					640
Phe	Gly	Gln	Asp	Glu	Asp	Val	Thr	Ser	Lys	Ala	Phe	Thr	Gly	Arg	Glu
				645					650					655	
Phe	Asp	Glu	Leu	Asn	Pro	Ser	Ala	Gln	Arg	Glu	Ala	Cys	Leu	Asn	Ala
			660					665					670		
Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ser	His	Lys	Ser	Lys	Ile	Val	Glu
		675					680					685			
Phe	Leu	Gln	Ser	Phe	Asp	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	Val
	690					695					700				
Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ser	Glu	Ile	Gly	Ile	Ala	Met	Gly
705					710					715					720
Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	Asp
				725					730					735	
Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	Ile
			740					745					750		
Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	Val
	755						760					765			
Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ala	Leu	Gly	Phe	Pro	Glu
	770					775					780				
Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	Gly
785					790					795					800
Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	Met
				805					810					815	
Asn	Lys	Pro	Pro	Arg	Asn	Pro	Lys	Glu	Pro	Leu	Ile	Ser	Gly	Trp	Leu
			820					825					830		

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Thr Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Val Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Gly Lys Glu Cys Val Gln Pro Ala Thr Lys Ser Cys Ser Phe Ser
 995 1000 1005
 Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile Met Pro
 1010 1015 1020
 Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp Met Phe
 1025 1030 1035 1040
 Trp Ser

<210> 28

<211> 1042

<212> PRT

<213> Homo sapiens

<400> 28

Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15
 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190
 Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220
 Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240
 Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255
 Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270
 Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285
 Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320
 Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile		
		355					360					365					
Leu	Asp	Arg	Val	Glu	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile		
	370					375					380						
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	His	Lys	Asp	Asp	Lys		
385					390					395					400		
Pro	Val	Asn	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile		
			405						410					415			
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly		
		420						425					430				
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu		
	435					440						445					
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys		
	450					455					460						
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys		
465				470						475					480		
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val		
			485					490						495			
Tyr	Cys	Thr	Pro	Asn	Lys	Pro	Ser	Arg	Thr	Ser	Met	Ser	Lys	Met	Phe		
			500					505					510				
Val	Lys	Gly	Ala	Pro	Glu	Gly	Val	Ile	Asp	Arg	Cys	Thr	His	Ile	Arg		
	515						520					525					
Val	Gly	Ser	Thr	Lys	Val	Pro	Met	Thr	Ser	Gly	Val	Lys	Gln	Lys	Ile		
	530					535					540						
Met	Ser	Val	Ile	Arg	Glu	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	Cys		
545					550					555					560		
Leu	Ala	Leu	Ala	Thr	His	Asp	Asn	Pro	Leu	Arg	Arg	Glu	Glu	Met	His		
			565						570					575			
Leu	Glu	Asp	Ser	Ala	Asn	Phe	Ile	Lys	Tyr	Glu	Thr	Asn	Leu	Thr	Phe		
		580						585					590				
Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Ile	Glu	Val	Ala	Ser		
	595						600					605					
Ser	Val	Lys	Leu	Cys	Arg	Gln	Ala	Gly	Ile	Arg	Val	Ile	Met	Ile	Thr		
	610					615					620						
Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Ile	Gly	Ile		
625					630					635					640		
Phe	Gly	Gln	Asp	Glu	Asp	Val	Thr	Ser	Lys	Ala	Phe	Thr	Gly	Arg	Glu		
			645						650					655			

Phe	Asp	Glu	Leu	Asn	Pro	Ser	Ala	Gln	Arg	Asp	Ala	Cys	Leu	Asn	Ala	
			660					665					670			
Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ser	His	Lys	Ser	Lys	Ile	Val	Glu	
		675					680					685				
Phe	Leu	Gln	Ser	Phe	Asp	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	Val	
		690				695					700					
Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ala	Glu	Ile	Gly	Ile	Ala	Met	Gly	
705					710					715					720	
Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	Asp	
			725						730					735		
Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	Ile	
			740					745					750			
Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	Val	
		755					760					765				
Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ala	Leu	Gly	Phe	Pro	Glu	
	770					775					780					
Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	Gly	
785					790					795					800	
Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	Met	
			805					810						815		
Asn	Lys	Pro	Pro	Arg	Asn	Pro	Lys	Glu	Pro	Leu	Ile	Ser	Gly	Trp	Leu	
		820						825					830			
Phe	Phe	Arg	Tyr	Leu	Ala	Ile	Gly	Cys	Tyr	Val	Gly	Ala	Ala	Thr	Val	
		835					840				845					
Gly	Ala	Ala	Ala	Trp	Trp	Phe	Ile	Ala	Ala	Asp	Gly	Gly	Pro	Arg	Val	
	850					855					860					
Ser	Phe	Tyr	Gln	Leu	Ser	His	Phe	Leu	Gln	Cys	Lys	Glu	Asp	Asn	Pro	
865					870					875				880		
Asp	Phe	Glu	Gly	Val	Asp	Cys	Ala	Ile	Phe	Glu	Ser	Pro	Tyr	Pro	Met	
			885						890					895		
Thr	Met	Ala	Leu	Ser	Val	Leu	Val	Thr	Ile	Glu	Met	Cys	Asn	Ala	Leu	
		900						905					910			
Asn	Ser	Leu	Ser	Glu	Asn	Gln	Ser	Leu	Leu	Arg	Met	Pro	Pro	Trp	Glu	
		915					920					925				
Asn	Ile	Trp	Leu	Val	Gly	Ser	Ile	Cys	Leu	Ser	Met	Ser	Leu	His	Phe	
	930					935					940					
Leu	Ile	Leu	Tyr	Val	Glu	Pro	Leu	Pro	Leu	Ile	Phe	Gln	Ile	Thr	Pro	
945					950					955					960	

Leu Asn Val Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Gly Lys Glu Cys Val Gln Pro Ala Thr Lys Ser Cys Ser Phe Ser
 995 1000 1005
 Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile Met Pro
 1010 1015 1020
 Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp Met Phe
 1025 1030 1035 1040
 Trp Ser

<210> 29
 <211> 998
 <212> PRT
 <213> Homo sapiens

<400> 29
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
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 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45
 Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp	
			180					185					190			
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu	
		195					200					205				
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Met	Gly	Val	Val	Val	
	210					215					220					
Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val	
225					230					235					240	
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe	
				245					250					255		
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp	
		260						265					270			
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp	
	275						280					285				
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val	
	290					295					300					
Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala	
305					310					315					320	
Leu	Gly	Thr	Arg	Arg	Met	Ala	Lys	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu	
				325					330					335		
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys	
		340						345					350			
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile	
		355					360					365				
Leu	Asp	Arg	Val	Glu	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile	
	370					375					380					
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	His	Lys	Asp	Asp	Lys	
385					390					395					400	
Pro	Val	Asn	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile	
				405					410					415		
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly	
			420					425					430			
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu	
		435					440					445				
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys	
	450					455					460					
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys	
465					470					475					480	

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Ser Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Val Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Val Leu Ser Ser Leu
 995

<210> 30

<211> 997

<212> PRT

<213> Homo sapiens

<400> 30

Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
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 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile	355	360	365	
Leu	Asp	Arg	Val	Glu	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile	370	375	380	
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	His	Lys	Asp	Asp	Lys	385	390	395	400
Pro	Val	Asn	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile	405	410	415	
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly	420	425	430	
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu	435	440	445	
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys	450	455	460	
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys	465	470	475	480
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val	485	490	495	
Tyr	Cys	Thr	Pro	Asn	Lys	Pro	Ser	Arg	Thr	Ser	Met	Ser	Lys	Met	Phe	500	505	510	
Val	Lys	Gly	Ala	Pro	Glu	Gly	Val	Ile	Asp	Arg	Cys	Thr	His	Ile	Arg	515	520	525	
Val	Gly	Ser	Thr	Lys	Val	Pro	Met	Thr	Ser	Gly	Val	Lys	Gln	Lys	Ile	530	535	540	
Met	Ser	Val	Ile	Arg	Glu	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	Cys	545	550	555	560
Leu	Ala	Leu	Ala	Thr	His	Asp	Asn	Pro	Leu	Arg	Arg	Glu	Glu	Met	His	565	570	575	
Leu	Glu	Asp	Ser	Ala	Asn	Phe	Ile	Lys	Tyr	Glu	Thr	Asn	Leu	Thr	Phe	580	585	590	
Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Ile	Glu	Val	Ala	Ser	595	600	605	
Ser	Val	Lys	Leu	Cys	Arg	Gln	Ala	Gly	Ile	Arg	Val	Ile	Met	Ile	Thr	610	615	620	
Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Ile	Gly	Ile	625	630	635	640
Phe	Gly	Gln	Asp	Glu	Asp	Val	Thr	Ser	Lys	Ala	Phe	Thr	Gly	Arg	Glu	645	650	655	

Phe	Asp	Glu	Leu	Asn	Pro	Ser	Ala	Gln	Arg	Asp	Ala	Cys	Leu	Asn	Ala
			660			665			670						
Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ser	His	Lys	Ser	Lys	Ile	Val	Glu
			675			680			685						
Phe	Leu	Gln	Ser	Phe	Asp	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	Val
			690			695			700						
Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ala	Glu	Ile	Gly	Ile	Ala	Met	Gly
705			710			715			720						
Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	Asp
			725			730			735						
Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	Ile
			740			745			750						
Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	Val
			755			760			765						
Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ala	Leu	Gly	Phe	Pro	Glu
			770			775			780						
Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	Gly
785			790			795			800						
Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	Met
			805			810			815						
Asn	Lys	Pro	Pro	Arg	Asn	Pro	Lys	Glu	Pro	Leu	Ile	Ser	Gly	Trp	Leu
			820			825			830						
Phe	Phe	Arg	Tyr	Leu	Ala	Ile	Gly	Cys	Tyr	Val	Gly	Ala	Ala	Thr	Val
			835			840			845						
Gly	Ala	Ala	Ala	Trp	Trp	Phe	Ile	Ala	Ala	Asp	Gly	Gly	Pro	Arg	Val
			850			855			860						
Ser	Phe	Tyr	Gln	Leu	Ser	His	Phe	Leu	Gln	Cys	Lys	Glu	Asp	Asn	Pro
865			870			875			880						
Asp	Phe	Glu	Gly	Val	Asp	Cys	Ala	Ile	Phe	Glu	Ser	Pro	Tyr	Pro	Met
			885			890			895						
Thr	Met	Ala	Leu	Ser	Val	Leu	Val	Thr	Ile	Glu	Met	Cys	Asn	Ala	Leu
			900			905			910						
Asn	Ser	Leu	Ser	Glu	Asn	Gln	Ser	Leu	Leu	Arg	Met	Pro	Pro	Trp	Glu
			915			920			925						
Asn	Ile	Trp	Leu	Val	Gly	Ser	Ile	Cys	Leu	Ser	Met	Ser	Leu	His	Phe
			930			935			940						
Leu	Ile	Leu	Tyr	Val	Glu	Pro	Leu	Pro	Leu	Ile	Phe	Gln	Ile	Thr	Pro
945			950			955			960						

Leu Asn Val Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Pro Ala Ile Leu Glu
 995

<210> 31

<211> 997

<212> PRT

<213> *Oryctolagus cuniculus*

<400> 31

Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
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Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val	225	230	235	240
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe	245	250	255	
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp	260	265	270	
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp	275	280	285	
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val	290	295	300	
Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala	305	310	315	320
Leu	Gly	Thr	Arg	Arg	Met	Ala	Lys	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu	325	330	335	
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys	340	345	350	
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile	355	360	365	
Leu	Asp	Lys	Val	Asp	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile	370	375	380	
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	His	Lys	Asp	Asp	Lys	385	390	395	400
Pro	Val	Lys	Cys	His	Gln	Tyr	Asp	Gly	Leu	Val	Glu	Leu	Ala	Thr	Ile	405	410	415	
Cys	Ala	Leu	Cys	Asn	Asp	Ser	Ala	Leu	Asp	Tyr	Asn	Glu	Ala	Lys	Gly	420	425	430	
Val	Tyr	Glu	Lys	Val	Gly	Glu	Ala	Thr	Glu	Thr	Ala	Leu	Thr	Cys	Leu	435	440	445	
Val	Glu	Lys	Met	Asn	Val	Phe	Asp	Thr	Glu	Leu	Lys	Gly	Leu	Ser	Lys	450	455	460	
Ile	Glu	Arg	Ala	Asn	Ala	Cys	Asn	Ser	Val	Ile	Lys	Gln	Leu	Met	Lys	465	470	475	480
Lys	Glu	Phe	Thr	Leu	Glu	Phe	Ser	Arg	Asp	Arg	Lys	Ser	Met	Ser	Val	485	490	495	
Tyr	Cys	Thr	Pro	Asn	Lys	Pro	Ser	Arg	Thr	Ser	Met	Ser	Lys	Met	Phe	500	505	510	
Val	Lys	Gly	Ala	Pro	Glu	Gly	Val	Ile	Asp	Arg	Cys	Thr	His	Ile	Arg	515	520	525	

Val	Gly	Ser	Thr	Lys	Val	Pro	Met	Thr	Ala	Gly	Val	Lys	Gln	Lys	Ile	530	535	540
Met	Ser	Val	Ile	Arg	Glu	Trp	Gly	Ser	Gly	Ser	Asp	Thr	Leu	Arg	Cys	545	550	555
Leu	Ala	Leu	Ala	Thr	His	Asp	Asn	Pro	Leu	Arg	Arg	Glu	Glu	Met	His	565	570	575
Leu	Lys	Asp	Ser	Ala	Asn	Phe	Ile	Lys	Tyr	Glu	Thr	Asn	Leu	Thr	Phe	580	585	590
Val	Gly	Cys	Val	Gly	Met	Leu	Asp	Pro	Pro	Arg	Ile	Glu	Val	Ala	Ser	595	600	605
Ser	Val	Lys	Leu	Cys	Arg	Gln	Ala	Gly	Ile	Arg	Val	Ile	Met	Ile	Thr	610	615	620
Gly	Asp	Asn	Lys	Gly	Thr	Ala	Val	Ala	Ile	Cys	Arg	Arg	Ile	Gly	Ile	625	630	635
Phe	Gly	Gln	Glu	Glu	Asp	Val	Thr	Ala	Lys	Ala	Phe	Thr	Gly	Arg	Glu	645	650	655
Phe	Asp	Glu	Leu	Asn	Pro	Ser	Ala	Gln	Arg	Asp	Ala	Cys	Leu	Asn	Ala	660	665	670
Arg	Cys	Phe	Ala	Arg	Val	Glu	Pro	Ser	His	Lys	Ser	Lys	Ile	Val	Glu	675	680	685
Phe	Leu	Gln	Ser	Phe	Asp	Glu	Ile	Thr	Ala	Met	Thr	Gly	Asp	Gly	Val	690	695	700
Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ala	Glu	Ile	Gly	Ile	Ala	Met	Gly	705	710	715
Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	Asp	725	730	735
Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	Ile	740	745	750
Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	Val	755	760	765
Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ala	Leu	Gly	Phe	Pro	Glu	770	775	780
Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	Gly	785	790	795
Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	Met	805	810	815
Asn	Lys	Pro	Pro	Arg	Asn	Pro	Lys	Glu	Pro	Leu	Ile	Ser	Gly	Trp	Leu	820	825	830

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<210> 32
<211> 1042
<212> PRT
<213> Oryctolagus cuniculus
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<400> 32
Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
   1                               5               10           15

Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
      20                     25             30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
    35                   40                 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
   50                       55              60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
   65                   70                75             80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
      85                   90              95
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Ile	Leu	Val	Ala	Asn	Ala	Ile	Val	Gly	Val	Trp	Gln	Glu	Arg	Asn	Ala		
			100					105						110			
Glu	Asn	Ala	Ile	Glu	Ala	Leu	Lys	Glu	Tyr	Glu	Pro	Glu	Met	Gly	Lys		
		115					120					125					
Val	Tyr	Arg	Gln	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Lys	Asp		
	130					135					140						
Ile	Val	Pro	Gly	Asp	Ile	Val	Glu	Ile	Ala	Val	Gly	Asp	Lys	Val	Pro		
145					150					155					160		
Ala	Asp	Ile	Arg	Leu	Thr	Ser	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp		
				165					170					175			
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp		
		180						185					190				
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu		
		195					200					205					
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Met	Gly	Val	Val	Val		
	210					215					220						
Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val		
225					230					235					240		
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe		
				245					250					255			
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp		
			260					265					270				
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp		
		275					280					285					
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val		
	290					295					300						
Ala	Ala	Ile	Pro	Glu	Gly	Leu	Pro	Ala	Val	Ile	Thr	Thr	Cys	Leu	Ala		
305					310					315				320			
Leu	Gly	Thr	Arg	Arg	Met	Ala	Lys	Lys	Asn	Ala	Ile	Val	Arg	Ser	Leu		
				325					330					335			
Pro	Ser	Val	Glu	Thr	Leu	Gly	Cys	Thr	Ser	Val	Ile	Cys	Ser	Asp	Lys		
		340						345					350				
Thr	Gly	Thr	Leu	Thr	Thr	Asn	Gln	Met	Ser	Val	Cys	Arg	Met	Phe	Ile		
		355					360					365					
Leu	Asp	Lys	Val	Asp	Gly	Asp	Thr	Cys	Ser	Leu	Asn	Glu	Phe	Thr	Ile		
	370					375					380						
Thr	Gly	Ser	Thr	Tyr	Ala	Pro	Ile	Gly	Glu	Val	His	Lys	Asp	Asp	Lys		
385					390					395					400		

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Ala Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575
 Leu Lys Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Glu Glu Asp Val Thr Ala Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn	Asp	Ala	Pro	Ala	Leu	Lys	Lys	Ala	Glu	Ile	Gly	Ile	Ala	Met	Gly	705	710	715	720
Ser	Gly	Thr	Ala	Val	Ala	Lys	Thr	Ala	Ser	Glu	Met	Val	Leu	Ala	Asp	725	730	735	
Asp	Asn	Phe	Ser	Thr	Ile	Val	Ala	Ala	Val	Glu	Glu	Gly	Arg	Ala	Ile	740	745	750	
Tyr	Asn	Asn	Met	Lys	Gln	Phe	Ile	Arg	Tyr	Leu	Ile	Ser	Ser	Asn	Val	755	760	765	
Gly	Glu	Val	Val	Cys	Ile	Phe	Leu	Thr	Ala	Ala	Leu	Gly	Phe	Pro	Glu	770	775	780	
Ala	Leu	Ile	Pro	Val	Gln	Leu	Leu	Trp	Val	Asn	Leu	Val	Thr	Asp	Gly	785	790	795	800
Leu	Pro	Ala	Thr	Ala	Leu	Gly	Phe	Asn	Pro	Pro	Asp	Leu	Asp	Ile	Met	805	810	815	
Asn	Lys	Pro	Pro	Arg	Asn	Pro	Lys	Glu	Pro	Leu	Ile	Ser	Gly	Trp	Leu	820	825	830	
Phe	Phe	Arg	Tyr	Leu	Ala	Ile	Gly	Cys	Tyr	Val	Gly	Ala	Ala	Thr	Val	835	840	845	
Gly	Ala	Ala	Ala	Trp	Trp	Phe	Ile	Ala	Ala	Asp	Gly	Gly	Pro	Arg	Val	850	855	860	
Ser	Phe	Tyr	Gln	Leu	Ser	His	Phe	Leu	Gln	Cys	Lys	Glu	Asp	Asn	Pro	865	870	875	880
Asp	Phe	Glu	Gly	Val	Asp	Cys	Ala	Ile	Phe	Glu	Ser	Pro	Tyr	Pro	Met	885	890	895	
Thr	Met	Ala	Leu	Ser	Val	Leu	Val	Thr	Ile	Glu	Met	Cys	Asn	Ala	Leu	900	905	910	
Asn	Ser	Leu	Ser	Glu	Asn	Gln	Ser	Leu	Leu	Arg	Met	Pro	Pro	Trp	Glu	915	920	925	
Asn	Ile	Trp	Leu	Val	Gly	Ser	Ile	Cys	Leu	Ser	Met	Ser	Leu	His	Phe	930	935	940	
Leu	Ile	Leu	Tyr	Val	Glu	Pro	Leu	Pro	Leu	Ile	Phe	Gln	Ile	Thr	Pro	945	950	955	960
Leu	Asn	Val	Thr	Gln	Trp	Leu	Met	Val	Leu	Lys	Ile	Ser	Leu	Pro	Val	965	970	975	
Ile	Leu	Met	Asp	Glu	Thr	Leu	Lys	Phe	Val	Ala	Arg	Asn	Tyr	Leu	Glu	980	985	990	
Pro	Gly	Lys	Glu	Cys	Val	Gln	Pro	Ala	Pro	Gln	Ser	Cys	Ser	Leu	Trp	995	1000	1005	

Ala Cys Thr Glu Gly Val Ser Trp Pro Phe Val Leu Leu Ile Val Pro
1010 1015 1020

Leu Val Met Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp Leu Leu
1025 1030 1035 1040

Trp Ser

